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**RVC Deployment:
Veterinary Care of SAR Canines on the SR
530 Slide Disaster**

Minden L. Buswell, DVM, MPH, DACVPM
WSDA Reserve Veterinary Corps (RVC) Coordinator



Introduction

About RVC Members

- ▶ **Currently 139 volunteer members in WA, OR, ID**
 - ▶ Veterinarians, veterinary technicians, and other first responders
- ▶ **Various levels of experience and training**
 - ▶ **RVC Level 2**
 - ▶ Basic ICS Training completed
 - ▶ **RVC Level 1**
 - ▶ Basic ICS Training and specific WSDA trainings completed
- ▶ **WSDA trainings includes:**
 - ▶ Further ICS and NIMS
 - ▶ Emergency/disaster workshops and foreign animal disease trainings



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Reserve Veterinary Corps Mission

SR 530 Slide


- ▶ March 22, 2014 at 10:37 am a landslide buried a residential community and part of the SR 530 near Oso, WA
- ▶ Lieutenant Governor, Brad Owen officially proclaimed a State of Emergency in Snohomish County
- ▶ March 24, 2014, President Obama declared a State of Emergency in WA, supplying federal aid
- ▶ ESF 11 - State Animal Health Plan was activated by the State Emergency Operations Center (EOC)



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Mission Request

- ▶ WA EOC sent a mission request on April 3, 2014 at 1600 to activate the WSDA – RVC
 - ▶ 2 veterinarians, 2 veterinary technicians, and 2 veterinary vehicles
- ▶ Support the federal and county search and rescue canines that were deployed to the SR 530 Slide

14-0995 Oso Landslide, Snohomish			
Requested Specific Resources			
 Washington State Emergency Operations Center			
Mission Tracking Board			
Tracking Number:		Worked By:	County
Date:	04/03/2014	Time:	16:47:06
Assigned By:		Assigned To:	
Priority:		Status:	
County:	Snohomish	City:	Everett
Originating Agency:	Snohomish County EOC	Originating Tracking Number	20144316897
Requestor Name:	Wendy Enyart	Requestor Phone:	425-327-1705
Requestor Fax:		Requestor Email:	sr530slidesupply
Subject:	Veterinarians S507-S510 linked E394		
Mission Description:	2 veterinarians; 2 vet techs; 2 vet response vehicles. One vet will be Med Unit Leader as the Vet T Contact: Dept of Agriculture, Reserve Vet Coordinator, Dr. Mindon Boswell, (cell) 360-280-6199		
For Personnel Resources Only			



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RVC Deployment

Incident Needs Assessment

- ▶ **Coordinating the vet support for local, state, and federal resources**
 - ▶ Emergency Management Specialist, Paige Beck and Dr. Buswell conducted a needs assessment for both the east and west sides of the incident
- ▶ **Resources Found On-Site**
 - ▶ 2 volunteer veterinary ambulance vehicles
 - ▶ Volunteer vets and vet techs
- ▶ **Needs**
 - ▶ 2 vets, 2 techs, vehicles/vet emergency supplies
 - ▶ Trained ICS Coordinator and assistant



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Incident Needs Assessment

- ▶ **WSDA contracted with two local veterinary clinics**
 - ▶ Seattle Veterinary Specialists and Pilchuck Veterinary Hospital to maintain their ambulances on the incident site
- ▶ **April 5, 2014 - Lori Gordon, DVM was activated through FEMA to act as an Incident Support Team (IST) Function**
 - ▶ Resource for the FEMA Search and Rescue (SAR) canines
 - ▶ Acted as the lead on medical services to all the FEMA SAR canines, with support from the WSDA RVC members



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SR 530 Slide Environment

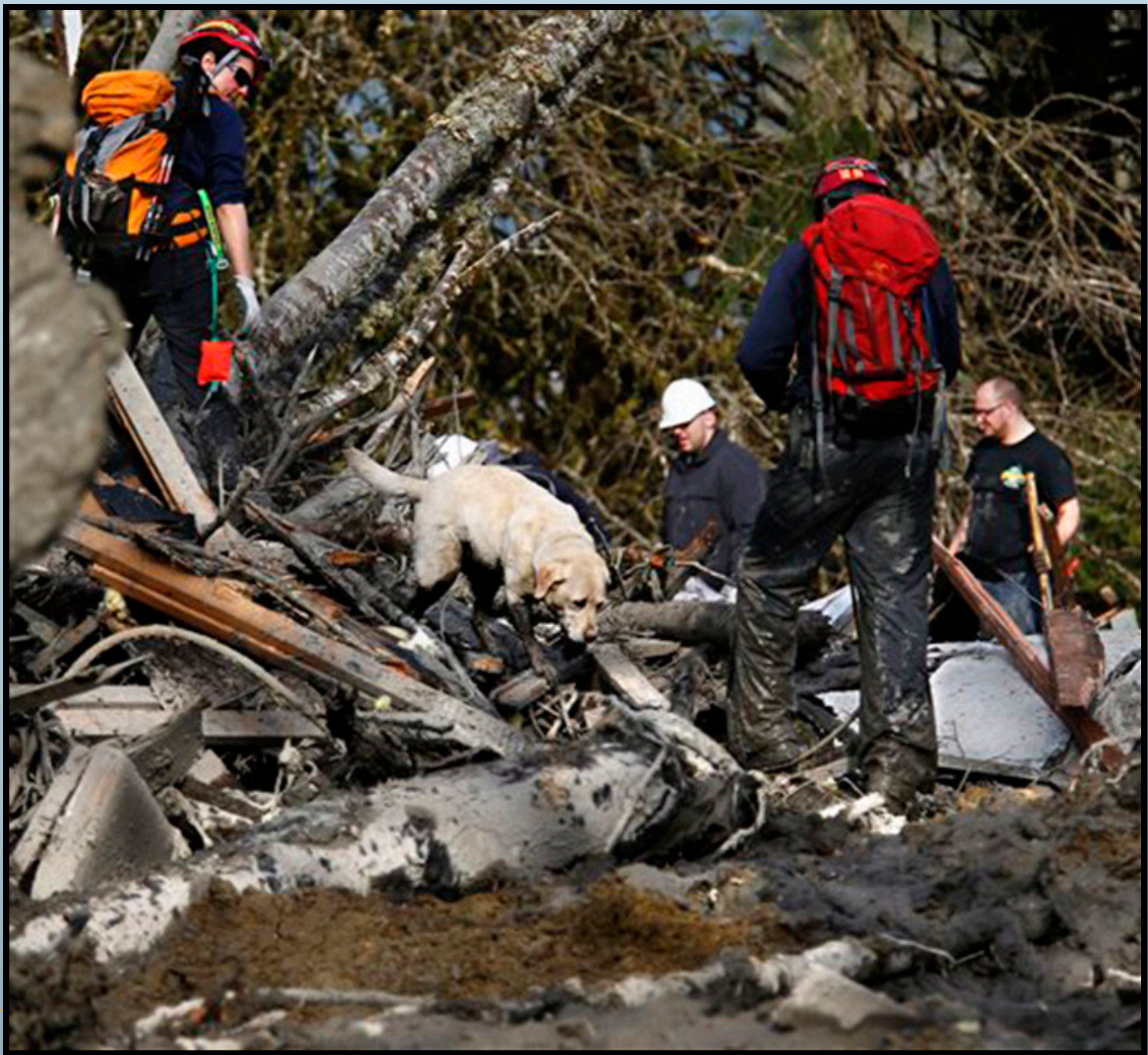










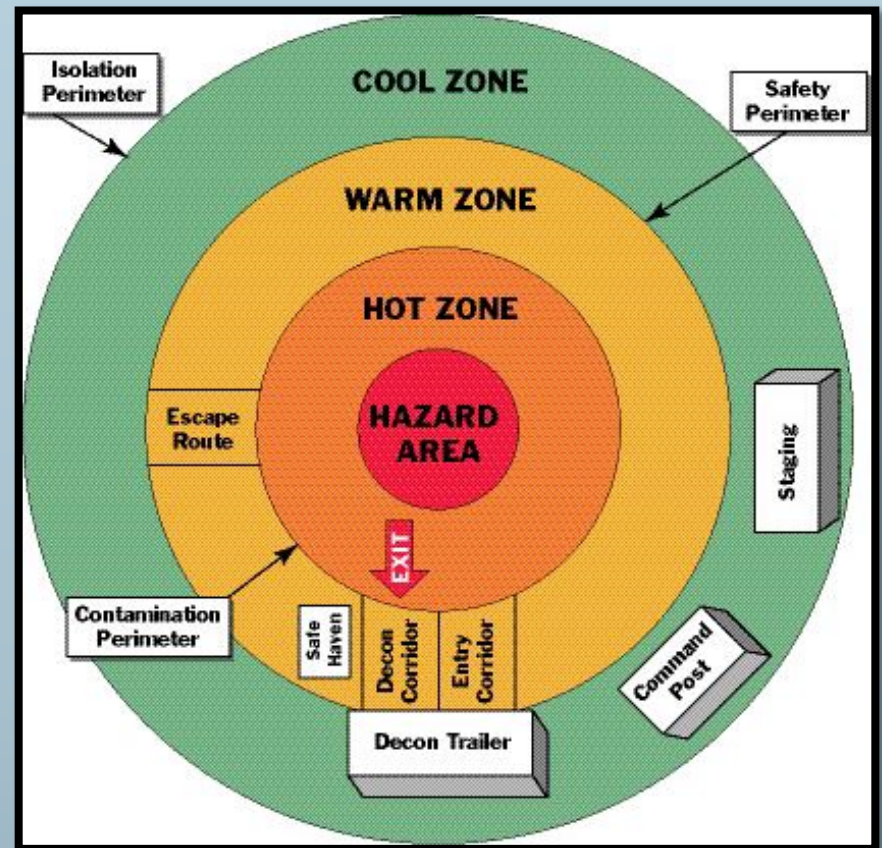






Environmental Assessment

- ▶ **Collaboration between local, state, and federal resources**
 - ▶ HAZMAT
 - ▶ Medical
 - ▶ Environmental Engineers
- ▶ **Followed standard HAZMAT Protocol**
 - ▶ Cold Zone – Rest and eating areas
 - ▶ Warm Zone – Resource/tool storage and gross decontamination
 - ▶ Hot Zone – Debris Field



<http://www.ecoweb.ca/issues/ViewPhoto.asp?pid=1000256237&stype=archive>

Responder Safety Hazards

▶ Chemical Hazards

- ▶ Propane tanks
- ▶ Petroleum
- ▶ Pesticides
- ▶ Refrigerant
- ▶ Mercury
- ▶ Acid from vehicle batteries
- ▶ Gun powder, ammunition, firearms
- ▶ Other household products

▶ Physical Hazards

- ▶ Cold weather (hypothermia)
- ▶ Soil instability
- ▶ Standing/moving water
- ▶ Household materials
 - ▶ Nails, tin, glass, etc.
- ▶ Heavy equipment accidents
- ▶ Vehicular accidents
- ▶ Boat accidents

▶ Biological Hazards

- ▶ Sewage
- ▶ Poor hygiene
- ▶ Fatigue/mental stress
- ▶ “Camp Crud”



Canine Responder Safety and PPE

▶ Major Injury Concerns

- ▶ Cold weather
- ▶ Physical trauma
- ▶ Systemic Toxicity
- ▶ Contact dermatitis
- ▶ Fatigue
- ▶ Dehydration

▶ Canine PPE

- ▶ No specific requirements
- ▶ Handlers
- ▶ Decontamination
- ▶ Neoprene vests
- ▶ Paw bandages as needed



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Veterinary Care



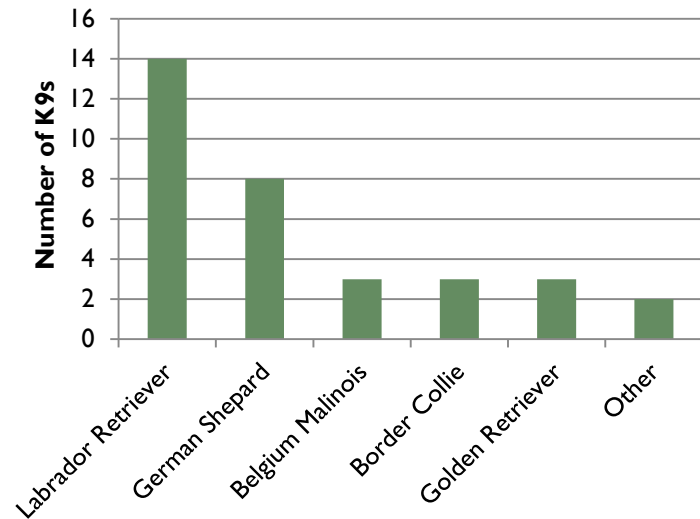
Veterinary Statistics

SR 530 Slide Veterinary Responders	
Affiliation	No.
WSDA Staff	12
RVC Members	18
SVS Staff	17
Pilchuck Staff	3
Volunteers	2
Total	52

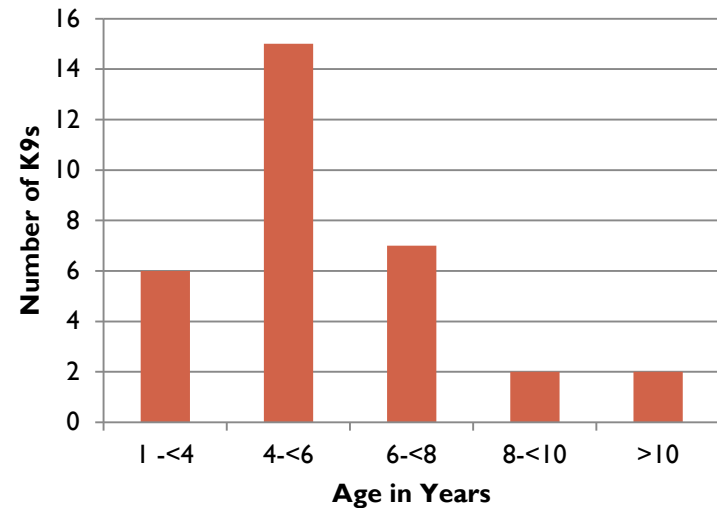


Canine Statistics

**SR 530 Slide
SAR K9 Breeds**



**SR 530 Slide
SAR K9 Ages**



Canine Veterinary Care

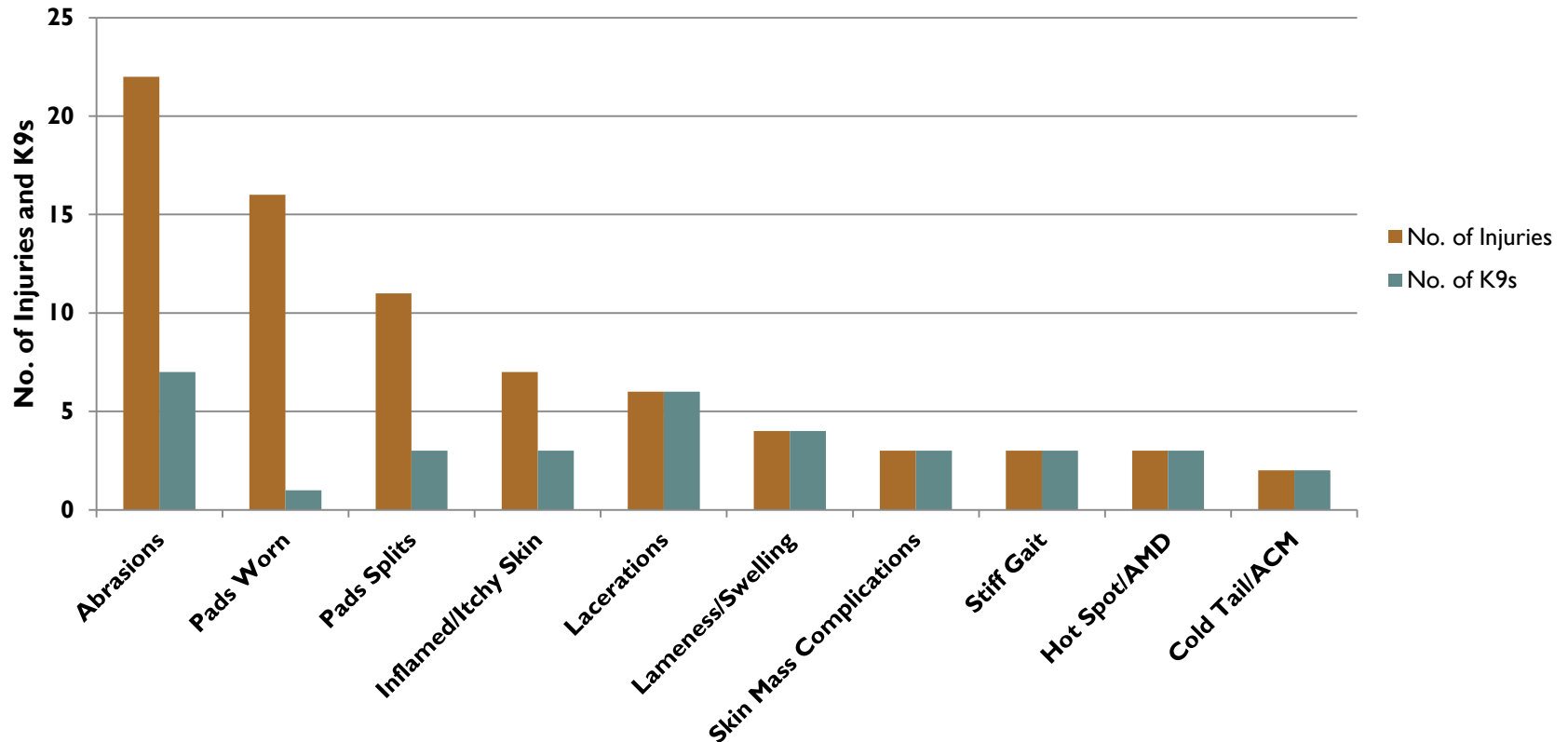
- ▶ **Anywhere from 4-25 dogs were seen daily for:**
 - ▶ Pre-mission physical exams, post-mission veterinary checks, and various minor medical treatments
 - ▶ Total RVC Exams = 133
- ▶ **The injuries/issues included:**
 - ▶ Mild hypothermia, mild exhaustion, dehydration
 - ▶ Mild/moderate dermatitis (“hot-spots”)
 - ▶ Paw-pad lacerations/abrasions
 - ▶ Inappropriate ingestion led to mild/moderate indigestion
 - ▶ Suspected toxicity issues on two dogs
 - ▶ No other major medical events



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Veterinary Care Statistics

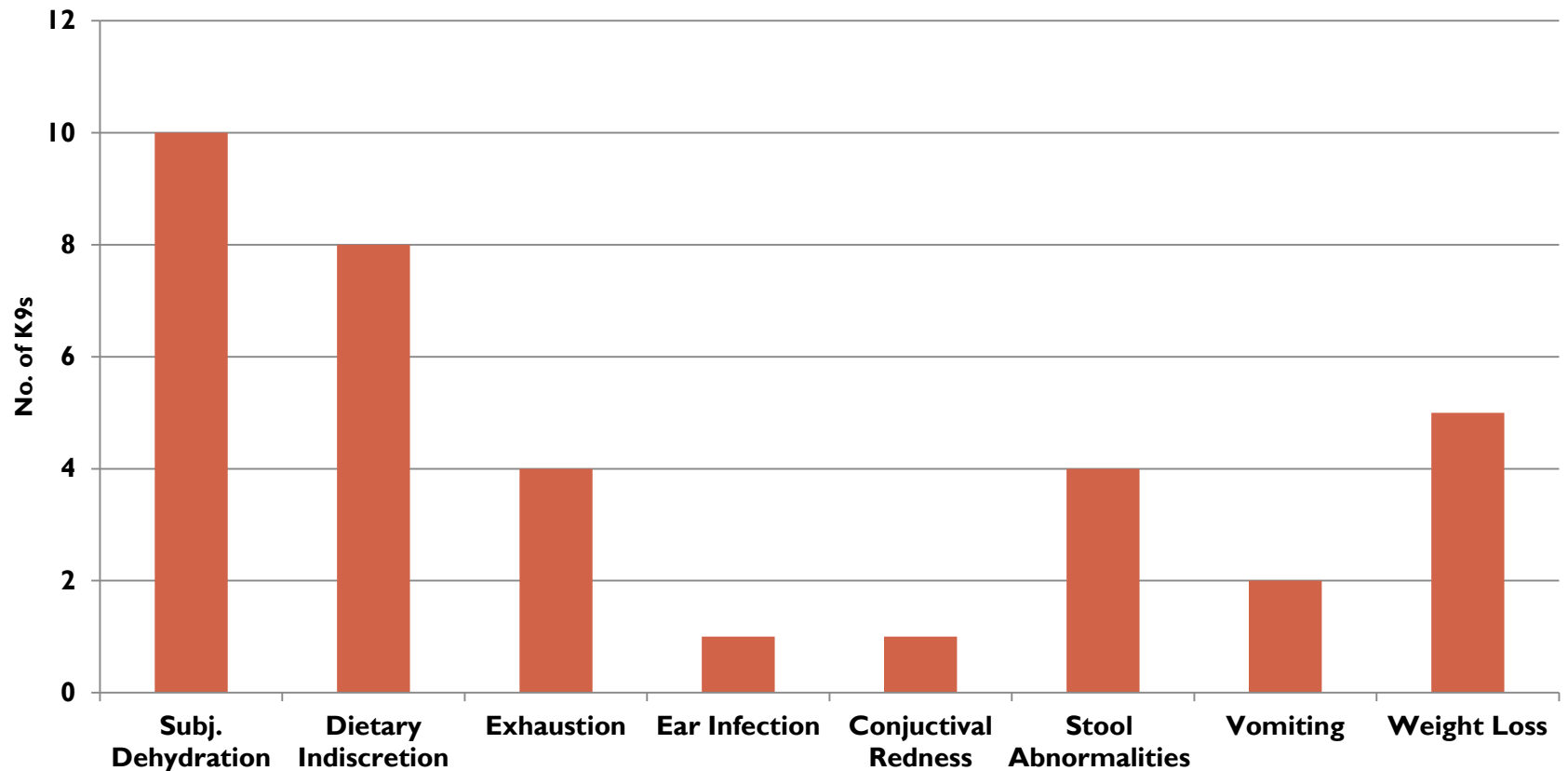
Canine Injuries



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Veterinary Care Statistics

Canine Medical Events



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Search and Rescue Canine Caveats

▶ Emergency Hospital Access

- ▶ Local emergency hospital “on-call” if canine needed transport for further treatment
- ▶ Pilchuck Veterinary Hospital “on-call” for helicopter transport
 - ▶ Had to be cleared with Air-Ops first

▶ Search and Rescue Canine Healthcare Differences

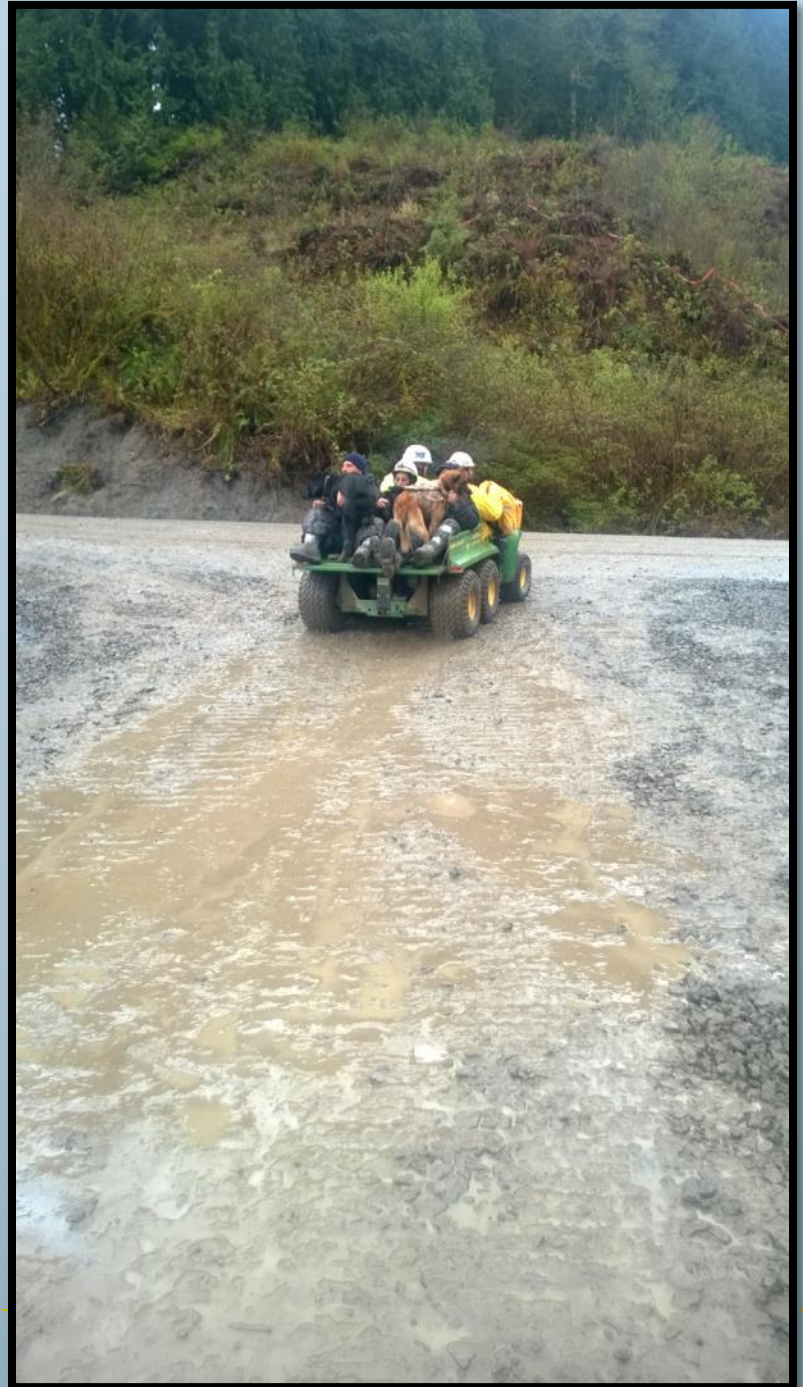
- ▶ Tend to have higher temperatures – can be up to 104°F
- ▶ Toxicity assessment - decontamination was necessary
 - ▶ Absorption for system toxicity risk low **IF** well-hydrated
- ▶ NO treats or toys!



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Decontamination





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RVC Demobilization

Demobilization

- ▶ On April 23, 2014, control of incident was transferred to Snohomish County Incident Management Team
 - ▶ At that time, only two victims were still missing
 - ▶ All victims have been located now
- ▶ The WSDA-RVC was officially demobilized on that day
 - ▶ FEMA search and rescue canines were all demobilized
 - ▶ County SAR canines were going to be used intermittently
- ▶ As of April 29, 2014 – Snohomish County ended active search operations in the field



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Lessons Learned

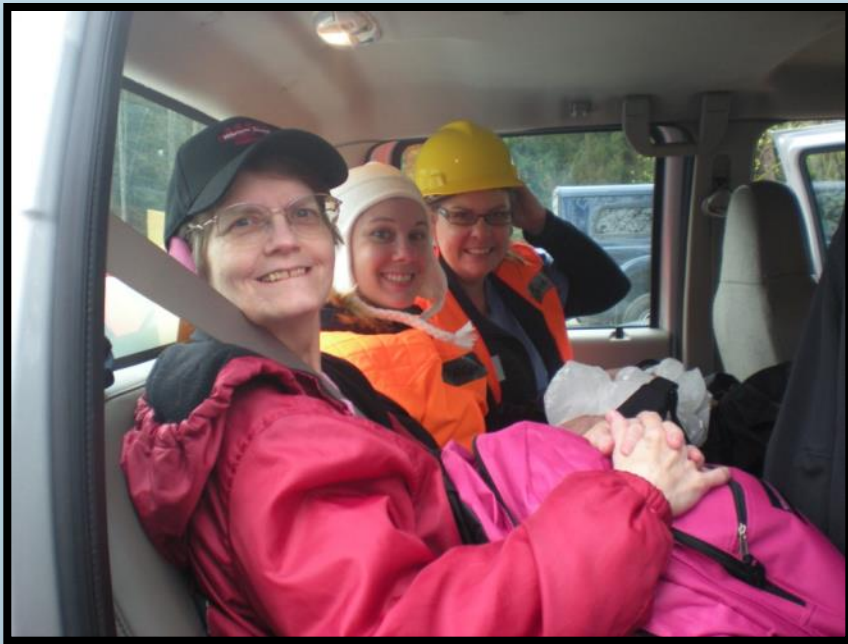
- ▶ Further training on HAZMAT, ICS, and situation awareness
- ▶ Further training on search and rescue (SAR) canines
 - ▶ Principals of search and rescue in general
 - ▶ How they are trained
 - ▶ Specific injuries
- ▶ Need for basic veterinary response equipment for small animal emergency/critical care for up to 30 canines
- ▶ You can never be fully prepared for these events, but training and exercising can help immensely!
- ▶ It is a shared GOAL - leave your ego at the door!



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Special Thank-You

- ▶ Dr. Lori Gordon, FEMA IST
- ▶ James Brown, EMT Clallam County Wildfire
- ▶ Pilchuck Veterinary Hospital and Seattle Veterinary Specialists
- ▶ Nikki Coffey, LVT
- ▶ Reserve Veterinary Corps Members
- ▶ WSDA Veterinarians and Staff

The community of Arlington, Oso, and Darrington



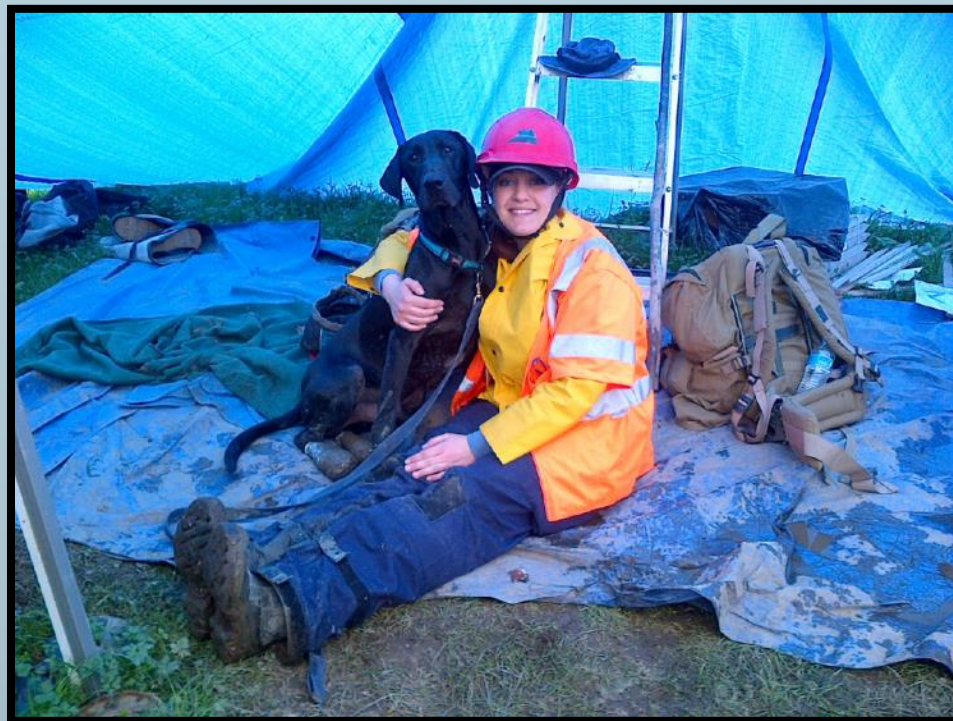
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Thank You

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Resources

- ▶ Gordon, Lori E. "Injuries and illnesses among urban search-and-rescue dogs deployed to Haiti following the January 12, 2010, earthquake." *Journal of the American Veterinary Medical Association* 240.4 (2012): 396-403.
- ▶ Gwaltney-Brant, Sharon M., et al. "General toxicologic hazards and risks for search-and-rescue dogs responding to urban disasters." *Journal of the American Veterinary Medical Association* 222.3 (2003): 292-295.
- ▶ Jones, Katherine E., et al. "Search-and-rescue dogs: an overview for veterinarians." *Journal of the American Veterinary Medical Association* 225.6 (2004): 854-860.
- ▶ Murphy, Lisa A., et al. "Toxicologic agents of concern for search-and-rescue dogs responding to urban disasters." *Journal of the American Veterinary Medical Association* 222.3 (2003): 296-304.
- ▶ Otto, Cynthia M., et al. "Field treatment of search dogs: lessons learned from the World Trade Center disaster." *Journal of Veterinary Emergency and Critical Care* 12.1 (2002): 33-41.
- ▶ Wismer, Tina A., et al. "Management and prevention of toxicoses in search-and-rescue dogs responding to urban disasters." *Journal of the American Veterinary Medical Association* 222.3 (2003): 305-310.



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Supplemental Slides

Critical Incident Stress Management

▶ What is CISM?

- ▶ Protocol developed to deal with traumatic events
- ▶ Structured, formal, and professional process
- ▶ Share experiences, vent emotions, learn about stress reactions

▶ History of CISM

- ▶ First developed for military combat veterans
- ▶ Spread to first responders
- ▶ Then to anyone impacted by the traumatic event



Green Cross – Academy of Traumatology

▶ **What is Green Cross?**

- ▶ International NGO
- ▶ Comprised of trained traumatologists and compassion fatigue providers
- ▶ Mental health professionals

▶ **What does Green Cross do?**

- ▶ Crisis assistance and counseling
- ▶ Referral services
- ▶ Long-term trauma counseling
- ▶ Animal-assisted therapy



Further Training Recommendations

- ▶ Join the WSDA – Reserve Veterinary Corps!
- ▶ Citizen Emergency Response Teams (CERTs)
- ▶ Local Search and Rescue Teams (SAR)
- ▶ Local Fire Departments
- ▶ FEMA Urban Search and Rescue (USAR)
- ▶ AVMA Veterinary Medical Assistance Teams (VMAT)
- ▶ USDA – APHIS – VS National Animal Health Emergency Corps (NAHERC)
- ▶ US – DHHS National Veterinary Responses Team (NVRT)



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